**Detailed Description of the Invention** (Clean Version)

This invention provides a means for combining the tooth brushing cleaning function with the gum massage and stimulation function and the much needed interdental brush function, all in one tool.

The assemblage of the present invention is illustrated in Figure 1, plan view, with the interdental hard brush and gum massage stimulator tip retracted in the end of the toothbrush.

In order to achieve the triple clean effect of this toothbrush, Figure 1 shows the toothbrush and its double parallel cylindrical handle containing at one end the bristles (23) of the brush (22), clustered in groups, to provide the common pattern to fully brush the teeth externally, in a conventional manner. Inside the toothbrush handle, as shown in Figures 2 & 3, there are two parallel cylindrical recess chambers (29) that run the full length of the handle. In addition, the handle neck is narrow (24) and slim for a short distance from the brush end up to the area where the user holds the said handle. At the point where the user holds the toothbrush, the handle is widened out to provide a wider and firmer grip for grasping it, and contains recessed into this grip area the hollow recess chambers (29) that hold sliding buttons (26) that are keyed (36) to sliders (34) that slide back and forth on the inside of the recess chambers inside the handle. Attached to the end of the sliders there are extension tubes (37) that hold the interdental hard brush (28) and the gum massager stimulator tip (30) for brushing in the gaps and spaces between the teeth, massaging the gums.

Cont. 1 of **Detailed Description of the Invention** ( Clean Version)

The sliding buttons (26) can be moved horizontally in slots (31) that control their travel distance, in either direction. Movement in one direction of the buttons (26) keyed (36) to sliders (34) that have internal sliding extension tubes (37), each independently extends out of the end of the toothbrush handle one of the periodontal tools, and movement in the opposite direction retracts that periodontal tool into its recess chamber inside the toothbrush handle. In like manner, Figure 2 & 3 show the opposite end of the toothbrush containing two identical sliding buttons (26), sliding extension tubes (37), keys (36), and a slider (34) in the long recess chamber (29) within the handle section of the toothbrush .

Figure 3 shows the close-out covers (47) hinged to the cylinder ends to seal them, avoiding loss as well as contamination of the periodontal tools while they are not in use.

Figure 4 shows, in a side view, both the gum massager stimulator tip and the interdental hard brush retracted into the toothbrush. All three are held firmly in the same tool and readily available for addressing each tooth cleaning function as needed, in any cleaning order, at the user discretion

Figure 5 shows the interdental hardbrush extended, and Figure 6 shows the gum massager extended.

Figure 6A provides a cross section view of a recess chamber. Each button travels the length of the slot (31) and thus the slider (34) moves from one end of the slot to other end of the slot, extending the extension tube with the periodontal tool out of the end of each cylinder.

Cont. 2 of **Detailed Description of the Invention** (Clean Version)

The ends of the internal sliding extension tubes (37) are made to accept at either end the said gum massager stimulator tip (30) or the interdental hard brush (28) or any other priodontal tool, should they be required. Both the gum massager stimulator tip (30) and the interdental hard brush (28) can be replaced as needed. The respective sliding extension tubes (37) have replacement capability.

Fig. 6B shows an enlarged view of the capability of assemblage and/or replacement of the periodontal tools: each extension tube (37) contains a slit (17) down one side, or two sides if needed, to permit the tube to be expanded in diameter and allow insertion of the periodontal tool stem (18) to be inserted and forceably pressed into the extension tube. The slit in the tube side walls capture and holds the stem (18) of the periodontal tool, by deflection of the slit tube side walls. The stem is slightly reduced in diameter where the sliding tube side walls grasp the stem and capture it. The stem contains minor indentations to impede and retard easy removal from the slit extension tubes and the inner wall of the extension tubes is course machined to increase the resistance of component accidental removal.

Although the description above contains many specificities, these should not be construed as limiting the scope of the invention, but as merely providing illustrations of some of the presently preferred embodiment of this invention. Thus, the scope of the invention should be determined by the appended claims covering any modifications that may be made therein and fall within its spirit.